

## ABSTRACT OF THE DISCLOSURE

The present invention relates to a signal modulation loop for the multi-mode mobile communication. The adaptive up-conversion 5 modulation loop is applied in the multi-mode mobile communication, and is used for signal integration for the communication system comprising the second generation communication system, the global system for mobile communication (GSM), and the third 10 generation communication system, the wideband code division multiple access (WCDMA), so as to achieve the object of multi-mode communication by using a single modulation loop.